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The relationship between fear of hypoglycemia and sleep quality among type 2 diabetic patients

ABSTRACT

Background. Fear of hypoglycemia can result in anxiety, stress, anger, depression and severe avoidance behaviors that it affects the sleep quality of diabetic patients. Therefore, the present study was conducted with the aim of investigating the relationship between fear of hypoglycemia and sleep quality among type 2 diabetic patients.

Methods. The present cross-sectional study was conducted on 400 type 2 diabetic patients referred to endocrinology clinic of Velayat Hospital and Boali Hospital in Qazvin, in 2019. Data were collected using a checklist for demographic variables, the Fear of Hypoglycemia Survey (FHS-W), and the Pittsburgh sleep quality index (PSQI). Descriptive statistics and Spearman correlation test were performed for data analysis using SPSS v24.

Results. In this study, the mean age of diabetic patients was 55.75 ± 10.31 . The majority of the participants were female ($n = 299$, 74.8%) and were treated with oral anti-diabetic drugs ($n = 174$, 43.5%). The mean score of sleep quality in patients was 8.98 ± 3.64 and the fear of hypoglycemia was 21.27 ± 11.92 . The results of this study showed that there was a significant

relationship between the fear of hypoglycemia and the poor sleep quality among patients ($P < 0.001$, $r = 0.305$).

Conclusion. The fear of hypoglycemia has a direct and significant relationship with poor sleep quality in diabetic patients; so that this fear reduces the quality of sleep in diabetic patients. Therefore, in order to provide adequate sleep to prevent inappropriate sleep complications, great attention should be paid to the issue of fear of hypoglycemia, and consider some actions to reduce this fear. (Clin Diabetol 2020; 10, 1: 149–154)

Key words: fear of hypoglycemia, sleep quality, type 2 diabetes

Introduction

Diabetes is not only recognized as a disease; but also, it is a collection of metabolic diseases that are caused by a disruption of the insulin's secretion or/and function, which is associated with an increase in the blood glucose level and a disruption of the metabolism of carbohydrates, lipids, and proteins [1]. According to the statistics, the number of diabetic people by the year 2035 is estimated to be 600 million. In Iran, studies have reported the prevalence of diabetes to be 9.6%, accounting for almost 5 million patients. Also, it is estimated that the number of diabetic patients will be tripled every 15 years [2, 3]. In addition to widespread prevalence of this disease, the multiple and disabling complications of it is an important issue [4].

One of the most important complications of diabetes known to be a serious and clinical concern in patients with diabetes mellitus is hypoglycemia [5].

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Clinical Diabetology 2020, 10, 1: 149–154

DOI: 10.5603/DK.2020.0057

Received: 10.06.2020

Accepted: 02.11.2020